

Appl. No.10/759,401
Amdt. dated December 10, 2004
Reply to Office Action of September 30, 2004

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listing of claims in this application:

Claims 1-10 (Cancelled)

Claim 11 (Previously Presented) A process for hydrocarbon conversion, adsorption or separation, in the presence of the SAPO-34 crystalline molecular sieve manufactured by a process comprising the steps of: (a) forming a surfactant-free synthesis mixture containing sources of silicon, of aluminium, and of phosphorus, in proportions appropriate to the formation of SAPO-34, and a structure-directing agent, where the source of silicon is a tetraalkyl orthosilicate, and (b) subjecting the synthesis mixture to hydrothermal treatment.

Claim 12 (Previously Presented) A process for the conversion of an oxygenate to olefins in the presence of the SAPO-34 crystalline molecular sieve manufactured by a process comprising the steps of: (a) forming a surfactant-free synthesis mixture containing sources of silicon, of aluminium, and of phosphorus, in proportions appropriate to the formation of SAPO-34, and a structure-directing agent, where the source of silicon is a tetraalkyl orthosilicate, and (b) subjecting the synthesis mixture to hydrothermal treatment.

Claim 13 (Cancelled)

Claim 14 (Cancelled)

Claim 15 (Cancelled)

Claim 16 (Cancelled)

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Claim 17 (Previously Presented) The process of claim 11 wherein the molar ratio of silicon to aluminium, expressed as $\text{SiO}_2 : \text{Al}_2\text{O}_3$, is at most 0.5:1.

Claim 18 (Previously Presented) The process of claim 11 wherein the tetraalkyl orthosilicate is a tetraethyl orthosilicate.

Claim 19 (Previously Presented) The process of claim 11 wherein the tetraalkyl orthosilicate is selected from the group consisting of a tetramethyl orthosilicate, a tetrapropyl orthosilicate, and a tetrabutyl orthosilicate.

Claim 20 (Previously Presented) The process of claim 11 wherein the structure-directing agent is TEAOH or a mixture of TEAOH and DPA.

Claim 21 (Previously Presented) The process of claim 11 wherein at least a part of the hydrothermal treatment step is carried out with agitation.

Claim 22 (Previously Presented) The process of claim 11, wherein the synthesis mixture has a molar composition within the ranges of

P_2O_5	:	Al_2O_3	0.6 to 1.2:1
SiO_2	:	Al_2O_3	0.01 to 0.5:1
H_2O	:	Al_2O_3	10 to 100:1

together with the structure-directing agent.

Claim 23 (Previously Presented) The process of claim 11 wherein the synthesis mixture is surfactant-free.

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Claim 24 (Previously Presented) The process of claim 11 wherein the SAPO-34 crystalline molecular sieve has a mean particle size of at most 400 nm.

Claim 25 (Previously Presented) The process of claim 11 wherein the SAPO-34 crystalline molecular sieve has a mean particle size of at most 200 nm.

Claim 26 (Previously Presented) The process of claim 11 wherein the SAPO-34 crystalline molecular sieve has a mean particle size of at most 100 nm.

Claim 27 (Previously Presented) The process of claim 11 wherein the SAPO-34 crystalline molecular sieve is subjected to the step(s) of one or more of the group consisting of washing, cation exchange, and calcining.